AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   **(currently amended)** A random access data transmission system using OFDMA (orthogonal frequency division multiple access) between a mobile station and a base station, ~~wherein~~ the mobile station comprising:

a resource selector for selecting a preamble transmission channel and a code-related resource for transmitting a preamble for a random access to the base station;

a preamble transmitter for using the transmission resource information selected by the resource selector to generate a preamble and transmitting the preamble to the base station through a preamble transmission channel;

a preamble access grant processor for receiving acknowledgment or non-acknowledgment information, which includes ~~including~~ a scheduling ID provided by the base station for each preamble, in [[the]] a preamble access grant from the base station according to the transmission by the preamble transmitter, and processing the [[same]] received information; and

a data transmitter for transmitting random access data through a data transmission channel associated with [[of]] the scheduling ID assigned to the mobile station based on the information processed by the preamble access grant processor.

2.   (original)   The random access data transmission system of claim 1, wherein the preamble transmitter fixes a specific slot with a preamble transmittable time from among an uplink frame comprising a plurality of slots, randomly selects one of subchannels of a radio resource of the specific slot, uses a code which is distinguishable from other codes, and transmits the preamble

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generated through the selection of the subchannel and usage of the code.

3.   (original)   The random access data transmission system of claim 2, wherein the slots of the uplink frame except the slot which is fixed with the preamble transmittable time are classified as a control information transmission channel and a data transmission channel, and random access data are loaded on part of the data transmission channel and transmitted to the base station.

4.   **(currently amended)** A random access data transmission system using OFDMA (orthogonal frequency division multiple access) between a mobile station and a base station ~~wherein~~ the base station comprising:

a preamble receiving processor for receiving a preamble from the mobile station and extracting corresponding preamble information;

an ID manager for assigning a specific scheduling ID to each <u>preamble sent by the</u> mobile station and managing the specific scheduling ID so that the mobile station may use a<u>n</u> assigned data transmission channel <u>associated with said scheduling ID</u>;

a scheduler for scheduling a data transmission time, and a transmission quantity of the mobile station together with the scheduling ID assigned to the mobile station by the ID manager `according to` channel environments and requirements of the mobile stations;

an access grant processor for using the preamble information of the preamble receiving processor and the scheduling ID of the ID manager to determine an acknowledgment/non-acknowledgment status, and transmitting preamble access grant configuring information including the scheduling ID to the mobile station; and

a data receiving processor for receiving the random access data through [[a]] <u>said</u> assigned data transmission channel from the mobile station `according to` a transmission result of the access grant processor, and processing [[them]] <u>the received random access data</u>.

5.   (original)   The random access data transmission system of claim 4, wherein the

preamble information of the preamble receiving processor includes information on a code, timing, and power used for transmitting the preamble by the mobile station.

6. (original) The random access data transmission system of claim 4, wherein the ID manager recovers the scheduling ID assigned to the mobile station when the data receiving processor finishes reception of the random access data.

7. (original) The random access data transmission system of claim 4, wherein the access grant processor loads the preamble access grant configuring information on a specific slot of a downlink frame comprising a plurality of slots, and transmits the same to the mobile station.

8. (original) The random access data transmission system of claim 7, wherein the specific slot is assigned for synchronization and base station search and other slots are assigned for downlink traffic slots in the downlink frame.

9. (original) The random access data transmission system of claim 8, wherein the downlink traffic slots are classified as a data traffic transmission time and a control signal traffic transmission time so that the random access data may be divided into part of each slot and then be transmitted.

10. **(currently amended)** A random access data transmission method using OFDMA (orthogonal frequency division multiple access) between a mobile station and a base station, the method at ~~procedure of~~ the mobile station comprising:

(a) selecting a preamble transmission channel and a transmission radio resource related to a code used for transmitting a preamble for a random access to the base station;

(b) using the transmission radio resource selected in (a) to generate a preamble and transmitting the preamble to the base station;

(c) receiving preamble access grant configuring information, which includes ~~including~~ a scheduling ID assigned by the base station <u>for each preamble,</u> and acknowledgment/non-acknowledgment information with respect to the preamble transmitted in (b), and checking a successful status of transmission of the preamble, and the scheduling ID; and

(d) ~~allowing the mobile station to~~ check<u>ing</u> an assignment of [[the]] <u>a</u> data transmission channel <u>associated with the scheduling ID</u> by using the mobile station's scheduling ID included in a control channel `according to` a checking result in (c), and transmitting random access data to the base station through the data transmission channel assigned to the mobile station.

11.   **(currently amended)** The random access data transmission method of claim 10, wherein (d) comprises ~~allowing the mobile station to~~ extract<u>ing</u> transmission control information including timing, a frequency, and power through the access grant information received in (c), and transmitting random access data by using the transmission control information.

12.   (original)   The random access data transmission method of claim 10, wherein (b) comprises fixing a specific slot with a preamble transmittable time from among an uplink frame including a plurality of slots, and transmitting a preamble generated by randomly selecting any one of the radio resources of the corresponding slot and using a code which is distinguishable from other codes.

13.   **(currently amended)** A random access data transmission method using OFDMA (orthogonal frequency division multiple access) between a mobile station and a base station, the <u>method at</u> ~~procedure of~~ <u>the</u> base station comprising:

(a) ~~allowing the base station to receive and analyze~~ <u>receiving and analyzing</u> a preamble transmitted from the mobile station, and assigning a specific scheduling ID <u>for each preamble</u> when the mobile station can be scheduled;

(b) determining an acknowledgment or a non-acknowledgment and forming preamble access

grant configuring information `according to` the preamble information analyzed in (a) and an assigned status of the scheduling ID, and transmitting the preamble access grant configuring information to the mobile station;

(c) ~~allowing the base station to schedule~~ <u>scheduling</u> a data transmission time, a <u>data</u> transmission channel, and a transmission quantity of each mobile station together with the scheduling ID assigned to each mobile station `according to` the mobile station's channel environments and requirements, and notifying the mobile station of scheduled results; and

(d) receiving random access data from the mobile station corresponding to the scheduling ID through the data transmission channel determined in (c), and processing the random access data.

14. (original) The random access data transmission method of claim 13, wherein (d) comprises recovering the scheduling ID assigned to the mobile station when the reception of the random access data from the mobile station is finished.

15. (original) The random access data transmission method of claim 13, wherein (b) comprises distributing the preamble access grant configuring information to part of a specific slot of a downlink frame comprising a plurality of slots, and transmitting it to the mobile station.